REMARKS

Reconsideration is requested.

Claims 13 and 15 have been withdrawn from consideration. Claims 11-12, and 14 are pending in the application.

Claims 11-12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,534,449 to Dennison. This rejection is respectfully traversed.

Claim 11 recites, in part, conducting a halo implant of devices formed over a substrate comprising memory circuitry and peripheral circuitry sufficient to impart to at least three of the devices three different respective threshold voltages. (Emphasis Added) Figure 6 and page 10, lines 1-16 of the present specification disclose further details.

Contrary to the assertions made on page 3, first paragraph of the Office Action, Dennison's Figure 2 and col. 2, lines 50-65 doesn't even teach or suggest conducting a halo implant of devices formed over a substrate comprising memory circuitry and peripheral circuitry sufficient to impart at least **two** of the devices **two** different respective threshold voltages, let alone three.

Dennison's col. 2, lines 50-53 discloses "the p-type halo implant is conducted at a first energy level to provide p-type first impurity concentration at a first depth..." and col. 2, lines 59-63 discloses "...the phosphorous implant is conducted at a second energy level to provide an n-type second impurity concentration at a second depth...." There is no teaching or suggestion regarding conducting a halo implant of devices formed over a substrate and comprising memory circuitry and peripheral

circuitry to impart different threshold voltage to different devices. Moreover, Dennison's disclosure is completely silent regarding achieving different threshold voltages. A search conducted in Dennison's patent failed to reveal even a single occurrence of a term"threshold voltage". Applicant is not sure about the rationale used by the Office Action in making the above-noted assertions to reject the claimed invention.

The Office Action further asserts that "conducting a halo implant of devices to impart to at least three devices three different respective threshold voltages" is "a mere duplication of parts and has no significance unless a new or unexpected result is produced." As demonstrated above, Dennison fails to even teach or suggest conducting a halo implant to impart two different threshold voltages to two different devices, let alone three different threshold voltages to three different devices. Dennison, in fact, fails to even mention "threshold voltage." Therefore, it would be inconceivable to assert that Dennison conducts halo implant to impart three different threshold voltages to three different devices. Dennison's halo implants are conducted to facilitate formation of complementary source and drain regions and improving short channel effects. See Dennison's col. 1, lines 46-48 and col. 4, lines 53-56.

In addition, claim 11 further recites "wherein the common masking step comprises masking only portions of some of the devices, the portions comprising portions of peripheral circuitry devices."

The Examiner, however, asserts that Dennison's Fig. 5(66) discloses "wherein the common masking step comprises **masking only some of the devices**

which receive the halo implant...." The Examiner's assertions may be correct. However, such assertions are not directed at the claimed invention.

Dennison's Figure 5 shows that n-channel transistors (shown under peripheral area 18) are masked [completely masked] with layer 66 and p-type halo implant is provided for the n-channel transistors. Thus, in Dennison, device (shown under peripheral area 18) which receives the halo implant 44 is shown to be completely masked by layer 66. However, claim 11 specifically recites "masking step comprises masking only portions of some of the devices...." Accordingly, Dennison teaches away from the claimed invention.

In view of the above noted distinctions, claim 11 is patentably distinct and unobvious over Dennison. Claim 11 is therefore allowable.

Claims 12 and 14 are also allowable at least for similar reasons set forth above with regard to claim 11.

This application is believed to be in condition for allowance and action to that end is requested. The Examiner is requested to telephone the undersigned in the event that the next office action is one other than a Notice of Allowance. The undersigned is available for telephone consultation at any time.

Respectfully submitted,

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